

REMARKS

This is in response to the Office Action mailed March 21, 2008, in which claims 21-38, 40 and 41 were pending. Claims 21-38, 40 and 41 were rejected as anticipated by Weiner U.S. Patent No. 6,056,748. Applicant respectfully traverses this rejection. The Weiner '748 patent was invented by one of the inventors of the present application, and the Assignee of the present invention also owns the Weiner '748 patent. Rather than being disclosed in the '748 patent, the present application specifically "improves upon the earlier inventions described in U.S. Pat. Nos. 6,056,748 and 6,283,964, both entitled MODULAR FIXATOR ASSEMBLY". Page 1, line 12-14. The application containing claims 21-38, 40 and 41 is in condition for allowance. Reconsideration and notice to that effect is respectfully requested.

In rejecting the present claims, the Office Action stated that Weiner '748 discloses... "support structure (20)", and "securing the distal bone pins relative to the support structure". In Weiner '748, the distal bone pins (40) are separated from the support structure (20) by the universal joint (46). As noted in the summary of the invention, the '748 construction provides "spanning capabilities thus, allowing motion at the wrist during treatment of fractures of the distal radius and other bones." Col. 1, line 41-43. Claim 21, in contrast to Weiner '748, requires "securing the distal bone pins relative to the support structure, such that the external fixator assembly fixes the distal bone relative to the long bone". Claim 25, in contrast to Weiner '748, requires that the distal body restrict movement of the joint and an initial healing duration with the joint and fracture fixed relative to the long bone. The Office Action does not attempt to explain how the Weiner '748 structure fixes the metacarpal relative to the radius, or how the wrist joint is restricted or fixed. There is no disclosure in Weiner '748 of any way to fix the universal joint (46), and the entire focus of the Weiner '748 treatment is to provide longitudinal traction WHILE PERMITTING MOTION OF THE METACARPAL RELATIVE TO THE RADIUS. Because Weiner '748 does not disclose or suggest any way to fix the universal joint (46) or any way to fix the metacarpal (or other distal bone) relative to the radius (or other long bone), the rejection of independent claims 21 and 25 is misplaced and should be withdrawn.

The Office Action continued on to state that Weiner '748 discloses... "placing the plurality of distal bone pins (40) transversely into a distal bone (128)" and "after initial healing duration

removing distal pins from the distal bone, and after a secondary healing duration removing the long bone pins from the long bone and removing the fragment pin from the healed fragments.” However, this statement from the Office Action is unsupported by the ‘748 disclosure.

The methods taught by the ‘748 disclosure are shown in FIGS. 6A, 6B and 6C. As such, Weiner ‘748 discloses three separate modes of use. In the mode of FIG. 6A, the plurality of distal bone pins (40) are placed transversely into a distal bone (metacarpal 128), leaving the metacarpal free to move relative to the radius. There is no disclosure of any removal of any bone pins after an initial healing duration while leaving other bone pins in place for a secondary healing duration. The mode of FIG. 6B is described as a different, second mode of attachment, without the outrigger pins and the pin outrigger. As stated at the specification, “Such use of the distractor device 12 is possible with certain types of fracture patterns.” Col. 5, line 23-24. The ‘748 patent does not disclose that the mode of FIG. 6B can or should be used sequentially AFTER the mode of FIG. 6A. Even if the ‘748 patent did disclose that the mode of FIG. 6B could be used sequentially after the mode of FIG. 6A for a secondary healing duration, the limitations of claim 21 would not be met, because the mode of FIG. 6B still has the distal bone pins (40) placed transversely into the distal bone (128). The mode of FIG. 6C is described as a different, third mode of attachment, which only uses the fragment pins. The ‘748 patent does not disclose that the mode of FIG. 6C can or should be used sequentially AFTER either the mode of FIG. 6A or the mode of FIG. 6b. Even if the ‘748 patent did disclose that the mode of FIG. 6C could be used sequentially after the mode of FIG. 6A for a secondary healing duration, the limitations of claim 21 would not be met, because the mode of FIG. 6C does not have the long bone pins in the radius proximally of the fracture. The rejection of independent claims 21 and 25 is misplaced, and should be withdrawn.

Claims 22-24 depend from claim 21, and further define aspects of how the distal body interacts with the main body in secured and unsecured states at various times during the primary or secondary healing duration. Claims 26-30 depend from claim 25. The ‘748 patent does not disclose or suggest using the main body 20 without the distal body 38, and does not disclose or suggest any way to fix the universal joint 46. As one example, claim 26 details that the external fixator have a securable adjustment segment with a secured state preventing movement of the distal body relative to the main body such that the external fixator secures the joint in a fixed position. The method of

claim 26 includes acts of attaching the main body to the long bone with the securable adjustment segment in its unsecured state, and securing the securable adjustment segment into its secured state for the initial healing duration. The Office Action never details how the universal joint 46 of the '748 patent can be used to secure the joint in a fixed position, and the '748 patent does not disclose or suggest such a secured state. As another example, claim 27 requires that the outrigger be pivotably connected to the main body. None of these dependent limitations are met by the '748 patent, nor does the Office Action attempt to explain how such limitations are met. Claims 22-24 and 26-30 should be allowed for their limitations as well.

Independent claim 31 requires changing the number of fragment pin supports carried by the outrigger without removing the outrigger from the main body. Independent claim 41 requires adding or removing a bone fastener support from the sliding recess of the track with the main body secured relative to the long bone and without removing the outrigger from the main body. The '748 patent includes fragment pin supports 16, having inwardly facing flanges 124 (FIG. 5) which mate into inner side grooves 64, 66 (FIG. 3B), with the flanges 124 running the full length of the outrigger 14 and being threaded through the I-shaped apertures 56 (FIG. 2C). The Office Action does not attempt to explain how the inwardly facing flanges 124 permit changing the number of fragment pin supports without removing the outrigger from the main body. The rejection of claims 31 and 41 should be withdrawn.

Dependent claims 32-37 and 40 define further aspects of the attachment between the fragment pin supports and the outrigger, which are simply different from the attachment provided by inwardly facing flanges 124 (FIG. 5) and inner side grooves 64, 66 (FIG. 3B) on the outrigger 14 of the '748 patent. The Office Action does not attempt to explain how the limitations of claims 32-37 and 40 are met by the '748 patent, and these claims should be allowed for their limitations as well.

Independent claim 38 requires "changing the angle at which the outrigger extends from the main body by pivoting the outrigger about an axis generally parallel to the long bone, and securing the outrigger relative to the main body at the changed angle". The Office Action does not attempt to explain how this limitation is met by the '748 patent. Compare FIGS. 2C and 3C of the '748 patent, which disclose no mechanism to permit changing the angle at which the outrigger extends from the main body by pivoting the outrigger about an axis generally parallel to the long bone, to FIG. 7 in the

Inventor: Weiner et al.

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present application detailing pivoting about axis 156. The prior art does not disclose or suggest the invention of claim 38, and the rejection of claim 38 should be withdrawn.

The application containing claims 21-38, 40 and 41 is in condition for allowance. Reconsideration and notice to that effect is respectfully requested. The Examiner is invited to contact the undersigned at the telephone number listed below if such a call would in any way assist in allowance of the application.

The Commissioner is authorized to charge payment of any additional fees associated with this paper or credit any overpayment to Deposit Account No. 50-2998.

Respectfully submitted,

SHEWCHUK IP SERVICES, LLC

Date: June 2, 2008

By: /JDS/

Jeffrey D. Shewchuk, Reg. No. 37,235

3356 Sherman Ct., Ste. 102

Eagan, MN 55121

Telephone: (651) 331-9558

Fax: (651) 688-3348

JDS